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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,689	08/19/2003	Steven Michael Wand	21723-0002	5098
26587	7590	04/05/2005	EXAMINER	
MCNEES, WALLACE & NURICK LLC 100 PINE STREET P.O. BOX 1166 HARRISBURG, PA 17108-1166			LEO, LEONARD R	
		ART UNIT		PAPER NUMBER
		3753		
DATE MAILED: 04/05/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/643,689	WAND ET AL.
	Examiner	Art Unit
	Leonard R. Leo	3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 02 March 2005.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,2,4,5,10-13,15-32 and 40 is/are pending in the application.  
 4a) Of the above claim(s) 16-18 and 27 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4,5,15,19-23,25-29,31 and 40 is/are rejected.  
 7) Claim(s) 10-13,24,30 and 32 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>see action</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse of the species of Figure 15 in the reply filed on November 29, 2004 is acknowledged. Applicant's election with traverse of the sub-species of Figure 8 in the reply filed on March 2, 2005 is acknowledged. The traversal is on the ground(s) that independence and distinctness has not been shown, nor search burden. This is not found persuasive because MPEP § 803 states, "Under the statute an application may properly be required to be restricted to one of two or more claimed inventions only if they are able to support separate patents and they are either independent (MPEP § 806.04 - § 806.04(i)) or distinct (MPEP § 806.05 - § 806.05(i))." (emphasis added) The species are independent, since the species are mutually exclusive and capable of supporting separate patents. See MPEP § 806.04(f). Search burden is never a sole consideration. There would be no search and examination burden if applicants state the species are obvious variants of one another.

The requirement is still deemed proper and is therefore made FINAL.

Claims 16-18 and 27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species and/or sub-species, there being no allowable generic or linking claim. Regarding claim 27, the nonelected species of Figure 16 reads on the claim.

### *Specification*

The disclosure is objected to because of the following informalities:

Paragraph 46, discloses Figure 15 having interwoven members. Instead, the disclosure describes Figure 16. Paragraph 47 correctly discloses Figure 15 as an unitary mesh.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 15, 19-21, 28 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Wennerberg. Wennerberg discloses unitary mesh 9 (similar to applicant's Figure 8) with a non-circular cross sectional profile and geometric attributes in Figure 1 and 3.

Claims 1-2, 4, 15, 19-21, 28 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Armbruster. Armbruster discloses unitary meshes in Figures 8 and 12 with non-circular cross sectional profiles and geometric attributes in Figure 13.

Claims 1-2, 4, 15, 19-21, 28 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Ruppel et al. Ruppel et al discloses unitary mesh 7 with a non-circular cross sectional profile and geometric attributes in Figure 5.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 22-23, 25-26, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wennerberg in view of Gregory.

Wennerberg discloses all the claimed limitations except a specific opening size.

Gregory discloses a heat exchanger comprising a plurality of alternately stacked plates 1 and inserts 2, wherein the insert 2 is a mesh 3 having a plurality of openings 5 with a diameter of 100 to 3000 microns (i.e. about 0.04 to 0.12 inches) for the purpose of achieving a desired heat exchange.

Since Wennerberg and Gregory are both from the same field of endeavor and/or analogous art, the purpose disclosed by Gregory would have been recognized in the pertinent art of Wennerberg.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Wennerberg openings with a diameter of 100 to 3000 microns (i.e. about 0.04 to 0.12 inches) for the purpose of achieving a desired heat exchange as recognized by Gregory.

Regarding claims 22-23 and 29, layer 4 of insert 2 is read as a "backing layer," which is composed of aluminum.

Regarding claim 31, 400 mesh is an opening diameter of about 114 microns, which is within the disclosed range of Gregory.

#### *Allowable Subject Matter*

Claims 10-13, 24, 30 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Information Disclosure Statements filed on August 19, 2003, July 14, 2004, December 27, 2004 and January 10, 2005 have been considered.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3753

April 4, 2005